

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

image sensing means which includes a first
element array having a plurality of photoelectric
5 conversion elements arranged in a line, and a second
element array shifted from the first element array by a
predetermined distance in a main scanning direction and
having a plurality of photoelectric conversion elements
arranged in a line, and outputs signals of the first
10 and second element arrays from a single output portion;
and

driving means having a first mode of reading
signals from the second element array and continuously
outputting the signals from the output portion, and a
15 second mode of reading signals from the first element
array and continuously outputting the signals from the
output portion.

2. The apparatus according to claim 1, wherein said
driving means alternately repeats the first and second
20 modes.

3. The apparatus according to claim 1, wherein said
driving means includes operation of alternately
repeating the first and second modes and operation of
continuously performing the first or second mode.

25 4. The apparatus according to claim 1, further
comprising:

a light source for irradiating an original with

light or making light pass through the original; and
imaging means for forming light reflected by the
original into an image on said image sensing means
while scanning light reflected by the original.

- 5 5. The apparatus according to claim 4, further
comprising:

analog gain control means for controlling an
analog gain of a signal output from said image sensing
means; and

- 10 an analog/digital converter for digitizing the
signal controlled by said analog gain control means.

6. The apparatus according to claim 5, further
comprising shading correction means for performing
shading correction for the digitized signal.

- 15 7. An image processing apparatus comprising:

image sensing means which includes a first
element array having a plurality of photoelectric
conversion elements arranged in a line, and a second
element array shifted from the first element array by a
20 predetermined distance in a main scanning direction and
having a plurality of photoelectric conversion elements
arranged in a line, and outputs signals of the first
and second element arrays from a single output portion;
and

- 25 driving means for outputting signals from one of
the first and second element arrays and resetting
signals from the other element array in the output

portion.

8. The apparatus according to claim 7, wherein said driving means alternately transfers signals from the first and second element arrays to the output portion, resets the signals from the second element array in the output portion, and continuously and sequentially outputs the signals of the first element array from the output portion.

9. The apparatus according to claim 7, further comprising:

a light source for irradiating an original with light or making light pass through the original; and imaging means for forming light reflected by the original into an image on said image sensing means while scanning light reflected by the original.

10. The apparatus according to claim 9, further comprising:

analog gain control means for controlling an analog gain of a signal output from said image sensing means; and

an analog/digital converter for digitizing the signal controlled by said analog gain control means.

11. The apparatus according to claim 10, further comprising shading correction means for performing shading correction for the digitized signal.

12. An image processing apparatus comprising:

a first element array having a plurality of

photoelectric conversion elements arranged in a line;

a second element array shifted from said first element array by a predetermined distance in a main scanning direction and having a plurality of

5 photoelectric conversion elements arranged in a line;

a first shift register for transferring signals from said first element array;

a second shift register for transferring signals from said second element array; and

10 an input unit for receiving at least three pulses having different phases and supplying the pulses to said first and second shift registers.

13. The apparatus according to claim 12, wherein said transfer means transfers the signals by using at least
15 three pulses having different phases.

14. The apparatus according to claim 12, further comprising driving means for inputting at least pulses having different phases to said input unit and performing control to add signals from adjacent
20 elements together in said shift register.

15. The apparatus according to claim 12, wherein two pulses having different phases are input to said input unit to output signals from said first and second element arrays without addition.

25 16. The apparatus according to claim 12, wherein at least three pulses having different phases are input to said input unit to perform control to add signals from

adjacent elements in said shift register, and two pulses having different phases are input to said input unit to output signals from said first and second pixel arrays without addition.

- 5 17. The apparatus according to claim 12, further comprising:

a light source for irradiating an original with light or making light pass through the original; and
imaging means for forming light reflected by the
10 original into an image on said image sensing means while scanning light reflected by the original.

18. The apparatus according to claim 17, further comprising:

analog gain control means for controlling an
15 analog gain of a signal output from said image sensing means; and

an analog/digital converter for digitizing the signal controlled by said analog gain control means.

19. The apparatus according to claim 18, further
20 comprising shading correction means for performing shading correction for the digitized signal.

20. A processing method for an image processing apparatus including a first element array having a plurality of photoelectric conversion elements arranged
25 in a line, a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of

photoelectric conversion elements arranged in a line,
and output means for outputting signals of the first
and second element arrays from a single output portion,
comprising the step of reading signals from the second
5 element array and continuously outputting the signals
from the output portion or reading signals from the
first element array and continuously outputting the
signals from the output portion.

21. A processing method for an image processing
10 apparatus including a first element array having a
plurality of photoelectric conversion elements arranged
in a line, a second element array shifted from the
first element array by a predetermined distance in a
main scanning direction and having a plurality of
15 photoelectric conversion elements arranged in a line,
and output means for outputting signals of the first
and second element arrays from a single output portion,
comprising the step of outputting signals sent from one
of the first and second element arrays from the output
20 portion, and resetting signals from the other element
array in the output portion.

22. A processing method for an image processing
apparatus including a first element array having a
plurality of photoelectric conversion elements arranged
25 in a line, and a second element array shifted from the
first element array by a predetermined distance in a
main scanning direction and having a plurality of

